

IN THE CLAIMS:

1. A method for executing a remote method, the method comprising:

wrapping each argument of a remote method when each argument is a remote object;

5 copying each argument of the remote method when the each argument is not a remote object;

invoking the remote method using each wrapped or copied argument;

wrapping a result of the invoked remote method when the result is a remote object; and

10 copying the result of the remote method when the result is not a remote object.

2. A method as recited in claim 1, wherein the argument or result is a remote object when its declared class implements a remote marker interface

15 3. A method as recited in claim 1, wherein the result is only wrapped or copied when an invocation thread associated with invoking the remote method is not being terminated, the method further comprising throwing an exception on the remote method when the invocation thread is terminated.

20 4. A method as recited in claim 3, wherein wrapping each argument and result includes:

creating a wrapper object for the argument or the result and remembering an association between the wrapper object and the argument or the result when a wrapper object has not already been created; and

finding the wrapper object for the argument or the result based on a previous association between the argument or the result and the wrapper object when the wrapper object has already been created.

- 5 5. A method as recited in claim 4, wherein creating the wrapper object for each argument and the result includes:

finding or generating a remote stub class;

creating an instantiation of the remote stub class; and

setting a data member within the remote stub class to refer to the argument or

10 the result.

6. A method as recited in claim 5, wherein generating the remote stub class includes:

generating a class name;

15 adding a method implementation for each method of a class of the argument or result being wrapped into a class definition array; and

remembering an association between the class and the remote stub class.

7. A method as recited in claim 6, wherein finding the remote stub class is based
20 on a previously remembered association between a class and the remote stub class.

8. A method as recited in claim 1, wherein copying each argument and the result includes:

serializing each argument or the result into a byte array when the each
25 argument or the result implements serialization;

deserializing the each argument or the result with respect to a target class loader associated with code that will use the copy of each argument or the result when the each argument or the result implements serialization;

implementing a failure process when the each argument or the result does not
5 implement serialization

9. A computer readable medium containing computer codes for executing a remote method, the computer readable medium comprising:

computer code for wrapping each argument of a remote method when the
10 argument is a remote object;

computer code for copying each argument of the remote method when the each argument is not a remote object;

computer code for invoking the remote method using the wrapped or copied argument(s);

15 computer code for wrapping a result of the remote method when the result is a remote object; and

computer code for copying the result of the remote method when the result is not a remote object.

20 10. A computer readable medium as recited in claim 9, wherein the argument or the result is a remote object when its declared class implements a remote marker interface.

11. A computer readable medium as recited in claim 9, wherein the result is only
25 wrapped or copied when an invocation thread associated with invoking the remote

method is not being terminated, the computer readable medium further comprising computer code for throwing an exception on the remote method when the invocation thread is terminated.

5 12. A computer readable medium as recited in claim 8, wherein wrapping the argument or the result includes:

creating a wrapper object for the argument or the result and remembering an association between the wrapper object and the argument or the result when a wrapper object has not already been created; and

10 finding the wrapper object for the argument or the result based on a previous association between the argument or the result and the wrapper object when the wrapper object has already been created.

13. A computer readable medium as recited in claim 12, wherein creating the
15 wrapper object for the argument or the result includes:

finding or generating a remote stub class;

creating an instantiation of the remote stub class; and

setting a data member within the remote stub class to refer to the argument or the result.

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14. A computer readable medium as recited in claim 13, wherein generating the remote stub class includes:

generating a class name;

adding a method implementation for each method of a class of the argument or

25 result being wrapped into a class definition array; and

remember an association between the class and the remote stub class.

15. A computer readable medium as recited in claim 14, wherein finding the remote stub class is based on a previously remembered association between a class
5 and the remote stub class.

16. A computer readable medium as recited in claim 9, wherein copying each of the argument or the result includes:

serializing each argument or the result into a byte array when the each

10 argument or the result implements serialization;

deserializing each argument or the result with respect to a target class loader

associated with code that is using the copy of each argument or the result when the

each argument or the result implements serialization;

implementing a failure process when the each argument or the result does not

15 implement serialization